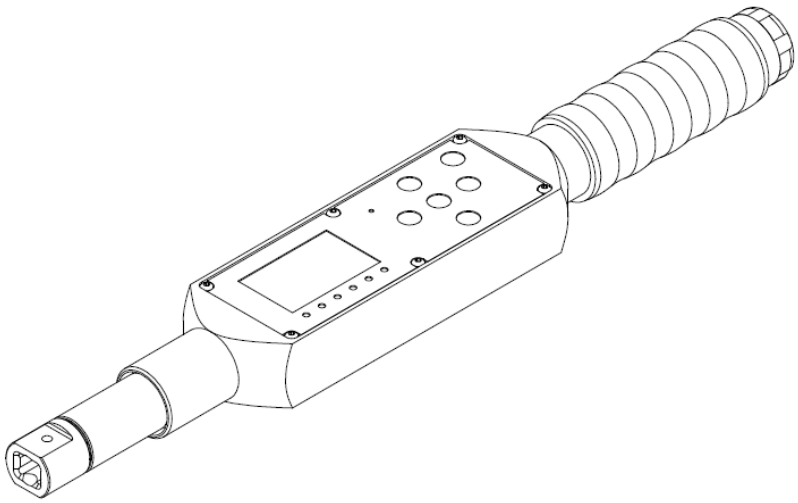
Operator Plus
EasyWin Plus 2.011



User Manual

GWK Norbert Gerlach GmbH & Co. KG
In der Steinbach 2, 55758 Schauren, Phone: +49 (0)6786/2904860, Fax: +49 (0)6786/2904861,
info@gwkgerlach.de

CONTENTS:

1 Operating Instructions 2
1.1 User Interface 2
1.1.1 LEDs 2
1.1.2 Push Button Functions (general) 2
1.2 Menus 3
1.2.1 Main menu 3
1.2.2 Set-up menu 3
1.3 Parameter preset usage 4
1.4 Other display readouts 5
2 EasyWin Plus 2.011 6
2.1 Installation 6
2.2 Main window of EasyWin Plus 6
2.3 Menu Database 7
2.4 Fundamental operating hints 7
2.5 Administer parameter sets 8
2.5.1 Tool parameter set view 9
2.5.2 Configuration list 9
2.5.3 List of tightening parameter sets 10
2.5.4 Creating and editing tightening parameter sets 10
2.5.5 Fundamental operating hints using parameter sets 12
2.6 Administer tightening results 15
2.6.1 Tool's tightening result view 16
2.6.2 Directory list 16
2.6.3 List of tightening results 16
2.6.4 List of final values and statistics view 17
2.6.5 Fundamental operating hints using tightening results 17
2.7 Pin code and tool number 19
2.8 Settings 19
2.8.1 General application settings 20
2.8.2 Hardware settings 21
2.8.3 Printer settings 22
2.9 Info about EasyWin Plus 22
3 Data output via serial interface 23
3.1 Header 23
3.2 Final tightening data 24
4 Technical Data 25

1 Operating Instructions

1.1 User Interface

1.1.1 LEDs

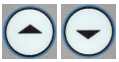
- Power/Snug Torque:
  - green: tool is activated
  - yellow: snug torque is reached (aktiv meassurement)

- tightening status:
  - displays 70%, 80%, 90% and 100% of achieved target value.
  - at 100% (STOP) release the tool!

- tightening result:
  - green: last tightening operation was **OK**
  - red: last tightening operation was **NOK**

1.1.2 Push Button Functions (general)

Left / Right – navigation and selection, to leave the menu or function use the left button



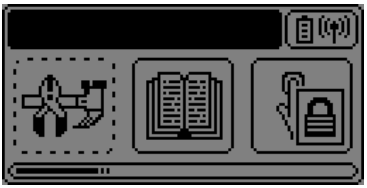
up / down – setting and selection

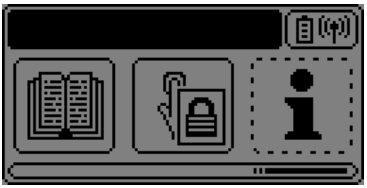
OK – confirming and selecting of functions, aborting a tightening process

SCAN – activation of the integrated barcode-scanner. When the LED lights up, the bar-code reading process was finished successfully

1.2 Menus

1.2.1 Main menu





Menu items in the Maim menu

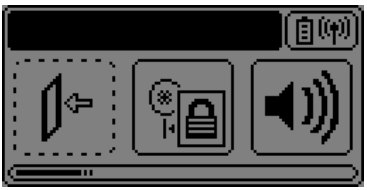
SETUP – Enter Setup-Menu

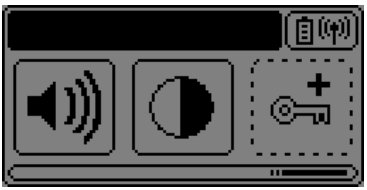
PARAMETERSATZ-BETRIEB – Start Parameter-set usage

WERKZEUG-INFO – display wrench information

1.2.2 Set-up menu

To enter the set-up menu a 5-digit pin code is needed. This pin code can be selected with the EasyWin Plus Software.





Menu items in the Set-up menu

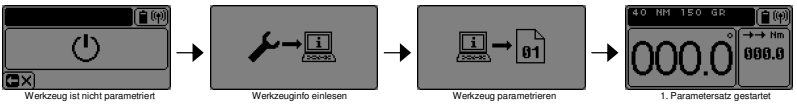
SETUP-CODE – Activation of optional / special functions and service functions of the tool

VOLUME-SETTING – adjust volume level of the acoustic signal

CONTRAST-SETTING – adjust the display-contrasts

1.3 Parameter preset usage

1.3.1.1 Parameter set-up using EasyWin Plus software



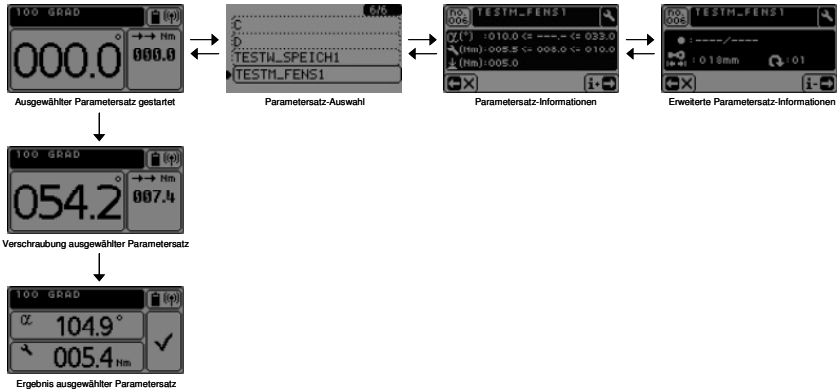
Push button functions during parameter preset-usage

Back to main menu. An active tightening process will be stopped and aborted without displaying any tightening results.

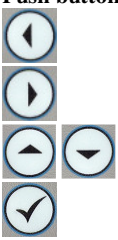
Enter parameter set selection. An active tightening process will be stopped and aborted without displaying any tightening results.

Termination of an active tightening process. Tightening results will be displayed.
Tara setting if tool is not in an active tightening procedure.

1.3.1.2 Selecting an using a parameter set



Push button functions in parameter-set selection menu.



Back to start of the last selected parameter-set, the actual selection will be aborted.

Display of parameter-set information.

Selection of a parameter-set.

Star the selected parameter-set

Push button functions in parameter-set info-display

Back to parameter-set selection menu

Display of detailed parameter-set information

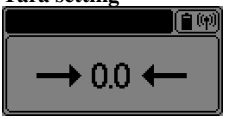
Push button functions in detailed parameter-set information display screen

Back to parameter-set selection menu

Back to the display screen of detailed parameter-set information

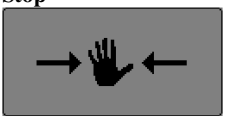
1.4 Other display readouts

Tara setting



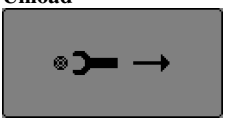
- Tara setting of torque measurement, tool must be free of any load!!

Stop



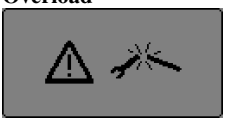
- Nominal value or Stop-value is reached, stop tightening and unload the tool!

Unload



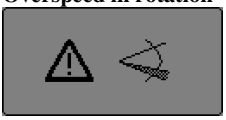
- Please unload the wrench completely!

Overload



- The wrench is overloaded and must be unloaded immediately! The tightening procedure is stopped!

Overspeed in rotation



- Tightening to fast, unload the tool! Tightening process is aborted.

2 EasyWin Plus 2.011

2.1 Installation

- Generally, you need to have administrator privileges for setting up the software.
- Before starting the installation, be sure to close all currently running applications.

After inserting the installation data medium, the setup program of EasyWin Plus will start automatically.

2.2 Main window of EasyWin Plus

Item	Name	Description
①	Database	Opens, saves, creates a new, or imports a database
②	Parameter sets	Administers the parameter sets and parameterizes the tool
③	Tightening results	Reads out and administers the tightening results
④	Pin code	Sets up the tool number and the pin code
⑤	Settings	Configures EasyWin Plus
⑥	Info	Displays information about EasyWin Plus

2.3 Menu Database

Before starting to work with the EasyWin Plus software, you should select an existing database or create a new database for storing the tightening parameter sets and the results. The last database, which has been in use, will be opened automatically at the startup of EasyWin Plus. The menu database offers the following options:

Item	Description
New…	Creates a new empty database on the storage medium. The existing tightening parameter sets and results will not be copied to the new database.
Open…	Opens an existing database which has been saved on the storage medium before.
Save as…	The existing tightening parameter sets and results are copied to a new database, which will be saved on the storage medium then.
Import…	Imports an EasyWin Plus V1.011 database (*.mdb) from a storage medium. After having imported the data, EasyWin Plus will prompt you to save the database with the new format.

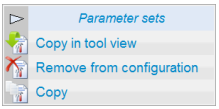
Data changes (parameter sets or results) will be saved automatically in the actual database when closing the particular editor window. So in “normal” use, there is no need to execute the data storage manually.

2.4 Fundamental operating hints

The administration windows for the tightening parameter sets and results, which are described in the following sections, will offer you different ways to execute the available actions:

At one hand, there will be buttons. They will only appear when the corresponding action is possible. This means that visibility of a button is depending on the availability of the related action.

At the other hand, the list views will offer context menus, which can be opened by clicking the right mouse button within the list views. The menus will show the available actions as separate menu items. The icons in front of the menu items are the same as shown on the buttons related to the same action. The menu content will be adapted just as the visibility of the buttons to the availability of the corresponding actions. At right, an example for a context menu is pictured:

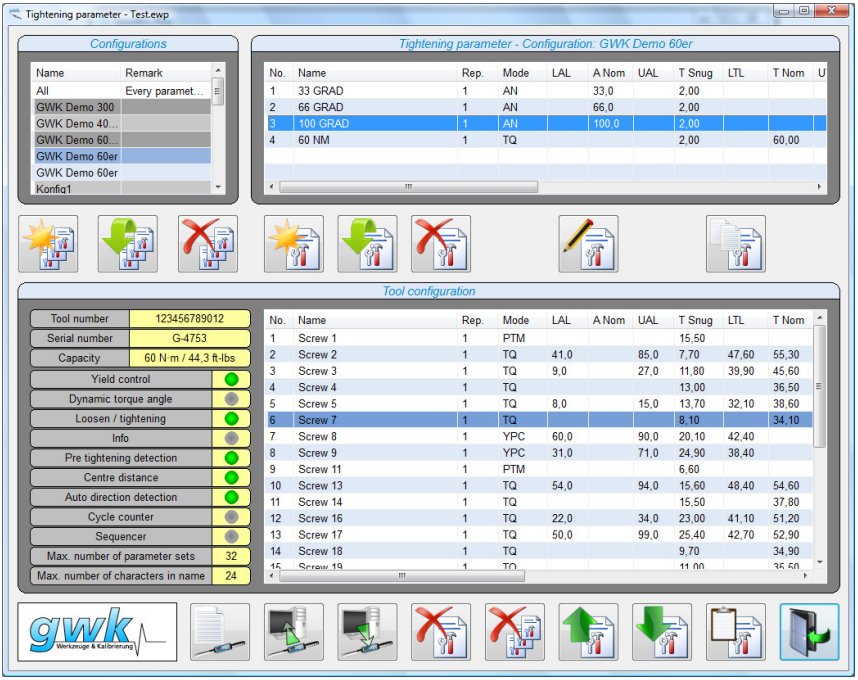


Additionally, some of the list views support drag & drop, so there are certain actions which can be executed by dragging and dropping the list view items.

To improve clarity in list views with many items and to help locating certain list view items, the most part of the list views support changing the sorting sequence by clicking on the column headers with the left mouse button. Then, the list view will be sorted alphabetically by the item of the clicked column.

2.5 Administer parameter sets

Pressing the button in the main window opens the tightening parameter set administration:


Tightening parameter - Test.ewp
Configurations
Name
Remark
All
Every paramet...
GWK Demo 300
GWK Demo 40...
GWK Demo 60...
GWK Demo 60er
GWK Demo 60er
Konfig1
Tightening parameter - Configuration: GWK Demo 60er
No.
Name
Rep.
Mode
LAL
A Nom
UAL
T Snug
LTL
T Nom
1 33 GRAD 1 AN 33,0 2,00
2 66 GRAD 1 AN 66,0 2,00
3 100 GRAD 1 AN 100,0 2,00
4 60 NM 1 TQ 2,00 60,00
Tool configuration
Tool number 123456789012
Serial number G-4753
Capacity 60 N·m / 44,3 ft-lbs
Yield control
Dynamic torque angle
Loosen / tightening
Info
Pre tightening detection
Centre distance
Auto direction detection
Cycle counter
Sequencer
Max. number of parameter sets 32
Max. number of characters in name 24
1 Screw 1 1 PTM 15,50
2 Screw 2 1 TQ 41,0 85,0 7,70 47,60 55,30
3 Screw 3 1 TQ 9,0 27,0 11,80 39,90 45,60
4 Screw 4 1 TQ 13,00 36,50
5 Screw 5 1 TQ 8,0 15,0 13,70 32,10 38,60
6 Screw 7 1 TQ 8,10 34,10
7 Screw 8 1 YPC 60,0 90,0 20,10 42,40
8 Screw 9 1 YPC 31,0 71,0 24,90 38,40
9 Screw 11 1 PTM 6,60
10 Screw 13 1 TQ 54,0 94,0 15,60 48,40 54,60
11 Screw 14 1 TQ 15,50 37,80
12 Screw 16 1 TQ 22,0 34,0 23,00 41,10 51,20
13 Screw 17 1 TQ 50,0 99,0 25,40 42,70 52,90
14 Screw 18 1 TQ 9,70 34,90
gwk
Werkzeuge & Kalibrierung

The window is divided in three big functional regions. The corresponding buttons are placed at the bottom part (below) the regions.

In the bottom half of the window, there is the tool view. After a tool has been read out, the tool view shows the actual tool configuration (tool parameter sets) and some information about the tool. In addition to that display function, the tool view is the place, where the parameter sets for a new tool configuration will be arranged.

At the top left side of the window, the configuration list is placed. A configuration is a group of parameter sets. The selection in the configuration list determines the content of the parameter set list in the top right part of the screen.

The list of parameter sets displays either all available tightening parameter sets or only the parameter sets of the selected configuration depending on the selected item in the configuration list.

2.5.1 Tool parameter set view

Button	Description
	Reads out the actual tool configuration and information about the tool and shows that data in the tool view.
	Parameterizes the tool with the actual content of the tool view.
	Creates a report out of the actual tool view. This action is only available, if the content of the tool view is equal to the actual tool configuration. That means that there shouldn't have been any changes after the read out or the parameterization of the tool.
	Deletes all the selected parameter sets from the tool view.
	Deletes all parameter sets from the tool view (the entire content).
	Moves the selected parameter sets one position upwards in the tool view. The position of the parameter set is related to its number. This should be taken into account when having selected a different sorting sequence other than by number.
	Moves the selected parameter sets one position downwards in the tool view.
	Pastes the parameter sets, which have been copied into the clipboard, in the tool view. The inserting position will be in front of the actually selected parameter set.

The tool view is able to receive via drag & drop on the one hand certain selected parameter sets from the list of tightening parameters and on the other hand a complete configuration out of the configuration list. To do so, simply drag the objects of interest into the tool view and drop them at the desired position.

Deleting a parameter set from the tool view can alternatively be executed by pressing the key <DEL> if the tool view has the focus.

2.5.2 Configuration list

Button	Description
	Creates a new configuration out of the actual tool view with a copy of its content. The name of the configuration will be selected automatically for renaming immediately after creating the configuration, so that a new name can be specified.
	Copies the selected configuration into the tool view. This action is the first step to configure the tool with an already existing configuration.
	Deletes the selected configuration. Only the composition of parameter sets is deleted, but the contained parameter sets will still be found in the list off all available parameter sets.

The configuration list has always the entry "all" as the first item. This entry is for displaying the pool of all parameter sets. The entry "new" can always be found as the last item of the configuration list. With the help of this item, a new configuration can be created simply by renaming it.

The individual configurations are able to receive parameter sets out of the list of tightening parameters via drag & drop. With this feature, you can compose parameter sets to a configuration without using the tool view as intermediate step.

Deleting a configuration can alternatively be executed by pressing the key <DEL> if the configuration list has the focus.

2.5.3 List of tightening parameter sets

Button	Description
	Opens the parameter set editor for creating a new parameter set.
	Copies the selected parameter sets into the tool view. This action can alternatively be executed via drag & drop.
	Deletes the selected parameter sets respectively remove the selected parameter sets from the configuration depending on the selection in the configuration list.
	Opens the parameter set editor for changing the parameters of the selected tightening parameter set.
	Copies the selected parameter sets into the clipboard. After that, the sets can be pasted in the tool view. This procedure is an alternative way to drag & drop.
	Hides those parameter sets, which are not suitable for the read out tool. This action is only available after having read out valid tool information and if there are “all parameter sets” selected in the configuration list.
	Switches the display in a way, that all parameter sets are shown, even those, which are not suitable for the red out tool. Those sets are marked with a gray background color.

A parameter set can only be deleted completely, if all parameter sets are displayed (no configuration selected in the configuration list). If a configuration is selected, the parameter set will only be removed out of the configuration, but it will still remain in the list of all parameter sets.

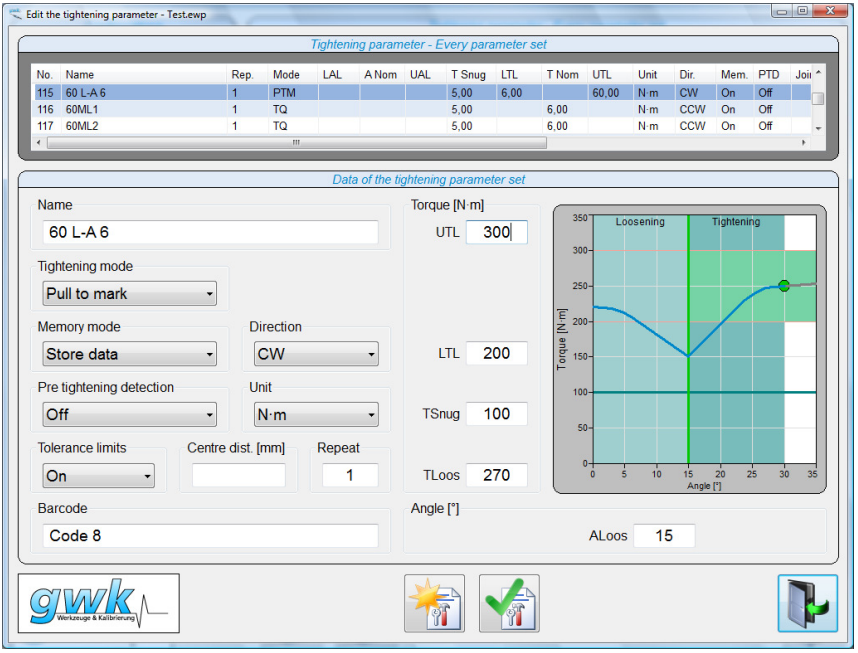
If a parameter set should be deleted completely and if that parameter set is used in at least one configuration, there will be a prompt that the set is used in configurations. If the deleting is confirmed, the parameter set will be deleted itself as well as it will be removed out of all configurations in which it is contained.

Deleting a parameter set respectively removing a parameter set from a configuration can alternatively be executed by pressing the key <DEL> if the list of tightening parameters has the focus.

Editing a parameter set can alternatively be started with a double click on the corresponding item in the list of tightening parameters.

2.5.4 Creating and editing tightening parameter sets

With the help of the button a new parameter set can be created. The parameters of an existing set can be changed by pressing the button . Both actions will open the parameter set editor.



In the top part of the window the list of all parameter sets can be found. Here, you can get an overview of all parameter sets in stock.

The edit fields and the drop down lists in the bottom half give the possibility to work on the data of a certain parameter set. If the editor has been opened to edit an existing parameter set, this set is selected in the list of tightening parameters and the data of the set is written to the related control elements. If the editor has been opened for creating a new parameter set, the control element will contain default values.

By double click on a parameter set in the list, the data of this set will be shown in the control elements.

The symbolic graph on the right side of the window illustrates the different parameters. The number of parameters will change depending on the selected tightening mode field and the selection of tolerance limits.

In the edit field “repeat”, a tightening counter can be specified. With the default setting “1” the cycle counter is deactivated. If the counter is set to a value greater than “1” up to “99”, the counter is enabled. Then, the tool will display the actual counter value. After each “OK” sub cycle the counter will be incremented until the repetition counter is equal to the value of this parameter. Then the repetition counter is automatically reset back to “1” to start a new cycle. The tightening cycle can be aborted or reset at any time by pressing the “Start/OK” button for at least 3 seconds.

With the help of the field “Centre dist.” the use of special ratchet equipment or screw attachment can be taken into account when creating parameter sets (max. 250mm). If the field is empty, the tool’s standard value will be used. That value is stored fixed in the tools memory and it represents the centre distance of the standard ratchet (18 mm up to Operator 100, 25 mm for Operator 200 and above).

During data input, the parameter set is always checked for plausibility and integrity. Implausible input will be marked with red frames around the related control element. If the put in data is valid, there will be two buttons for taking over the input. The visibility of the buttons is depending on whether the data has been changed and whether an equal parameter set already exists.

Button	Description
	Creates a new parameter set out of the data input and appends the parameter set to the list of tightening parameters.
	Applies the data input to the parameter set with the specified name resp. to the selected parameter set.
	Closes the parameter set editor and returns back to the parameter set administration.

2.5.5 Fundamental operating hints using parameter sets

In this chapter, a few examples are given to demonstrate some fundamental operating methods for the tool parameterization and the handling of configurations in the parameter set administration.

2.5.5.1 Configuring the tool

- Create the desired parameter sets, if not already existing.
- Select the parameter sets and insert them into the tool view. This action can be executed in 3 different way with the same result:
  - by pressing the button
  - with drag & drop
  - with the help of the clipboard
- Repeat the above step as long as the desired composition of parameter sets is generated in the tool view. The order of the parameter sets in the tool view can be adjusted at any time using the buttons and .
- Connect the tool and switch it on.
- Send the actual tool configuration shown in the tool view to the tool with the help of the button .
- Optionally, the composition of parameter sets can be added to the configuration list by pressing the button .

2.5.5.2 Creating configurations

Configurations can be created in three different ways.

2.5.5.2.1 Creating configurations in the tool view

The first way to create a configuration is using the tool view. The method is the same as described in the above section “configuring the tool”. The configuration can be created without having a tool within reach. The steps “connecting and switching on the tool” and “sending the configuration to the tool” can be left out then.

2.5.5.2.2 Creating configurations in the configuration list

A further method for creating configurations is supported by the configuration list. The list always contains an item “new” at the end. You can drag & drop here tightening parameters out of the parameter list at the right side. The parameter sets will be added at the end of the configuration. Finally, the configuration should be renamed by a left mouse click. Optionally, a remark can be added in the second column.

2.5.5.2.3 Creating configurations by read out from the tool

Additionally, a configuration can be created when a configured tool is read out with the button . The tool’s parameter sets will be added automatically at the end of the tightening parameter set list, if they are not already contained in the list. Pressing the button will create a new configuration out of the tool view.

2.5.5.3 Transferring configurations to the tool

- Select the desired configuration in the configuration list.
- Copy the selected configuration into the tool view with the help of the button . This step can alternatively be executed via drag & drop.
- Connect the tool and switch it on.
- Transfer the configuration with the button into the tool.

2.5.5.4 Searching for parameter sets

Locating certain parameter sets in the tightening parameter list can be made easier by switching the sorting criteria with a click into the related column header.

To locate certain parameter sets from configurations in the total list or vice versa, the selection of those parameter sets can help as described in the following sections.

2.5.5.4.1 Locating parameter sets from a configuration in the total list

If one or more parameter sets from a configuration should be located in the total list of tightening parameter sets, you can proceed as following:

- Select the relevant configuration in the configuration list. After that, the list of tightening parameter sets displays the parameter sets of the selected configuration.
- Now select the desired parameter sets in the list of tightening parameter sets.
- Select the item “all” in the configuration list. Now, the list of tightening parameter shows all available parameter sets and the relevant parameter sets are selected to locate them easily.

2.5.5.4.2 Locating parameter sets from the total list in a configuration

If one or more parameter sets from the total list of tightening parameter sets should be located in a configuration, you can proceed as following:

- Select the item “all” in the configuration list. Now, the list of tightening parameter shows all available parameter sets.
- Now select the desired parameter sets in the list of tightening parameter sets.
- Select the related configuration in the configuration list. Now, the list of tightening parameter shows the parameter sets of the selected configuration and the relevant parameter sets are selected to locate them easily.

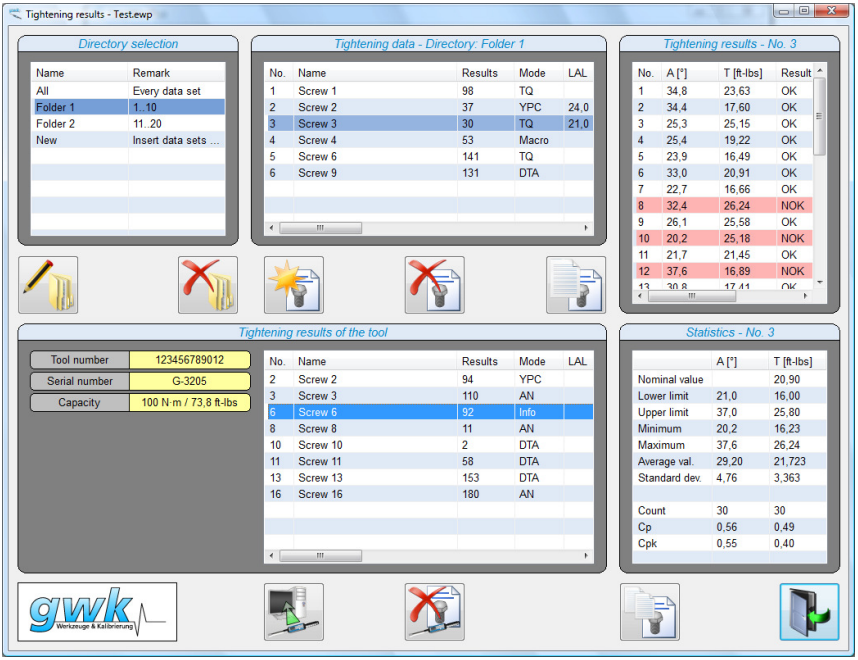
2.5.5.5 Creating macros (sequencer)

If the feature “sequencer” is supported by the tool, a complete configuration can be executed as a so called macro. To do so, a parameter set with tightening mode “macro” has to be placed to the first position of the tool view. The name of that parameter set is taken for identifying the macro. In macro mode, the tool processes all subsequent parameter sets as a block, which means that if the cycle counter of the actual set is completed, the tool automatically switches to the next parameter set.

A parameter set with tightening mode macro is only allowed at the first position of the tool view, otherwise the configuration is invalid.

2.6 Administer tightening results

With the use of the button in the main window the following dialog for the administration of tightening results will be opened:



The window is divided into five big functional regions. The related buttons are placed at the bottom margin of those regions.

In the bottom left area, the tool view is placed. After a tool has been read out, the tool view displays the content of the tool's memory for tightening results and some information about the tool. After the read out of the tool, all sets of tightening results in the tool view are selected for further processing.

The top left area of the window contains the directory list. The tightening results can be placed into a directory to get better clarity for the user. The selection in the directory list determines the content of the list of tightening results in the top middle part of the window.

The list of tightening results displays either the total pool of tightening results or only the sets of tightening results which are related to the selected directory depending on the selection in the directory list.

At the right part of the window, the list of final values and the statistics can be found. They show the details of the selected set of tightening results.

2.6.1 Tool's tightening result view

Button	Description
	Reads out the content of the tool's memory for tightening results and displays the tool information in the tool view.
	Deletes the tightening results, which are selected in the tool view, directly from the tool's memory.

The tool view shows immediately after tool read out the content of the tool's memory for tightening results. This information provides the starting point for further read out of the tightening data. The data sets of interest can be selected and then they can be read out and added to the list of tightening results with the use of the methods which are described later in this section.

2.6.2 Directory list

Button	Description
	Renames the selected directory so that a new name can be assigned.
	Deletes the selected directory. Only the composition is deleted, the contained tightening results will still remain in the list of all tightening results.

The directory list always contains the item "all" as first item to display the total pool of tightening results. At the end of the directory list, the item "new" is always present. With the help of this item, a new directory can be created simply by renaming that entry.

The items in the list of tightening results can be related via drag and drop exactly to one directory. With this feature, the sets of tightening results can be combined to a group. The intension is to get more clarity for the user.

Deleting a directory can be executed alternatively by pressing the key <DEL> if the directory list is focused.

2.6.3 List of tightening results

Button	Description
	Reads out the sets of tightening result, which are selected in the tool view, out of the tool's memory and appends them as new entries to the list of tightening results. Before reading out, the user will be asked whether the results should be deleted from the tool's memory after read out.
	Deletes the selected sets of tightening results irrevocably out of the list of tightening results.
	Creates a report out of the selected set of tightening results.

The read out of the selected tightening data from the tool can alternatively be carried out with a double click onto the selected entries in the tool view or via drag and drop of the selected tool view entries into the list of tightening results.

Deleting a set of tightening results can be executed alternatively by pressing the key <DEL> if the list of tightening results is focused.

2.6.4 List of final values and statistics view

Button	Description
	Copies the actual list of final values and the statistics view into the clipboard, to import that data into other applications. The data is formatted as tabulator separated text.

2.6.5 Fundamental operating hints using tightening results

In this chapter, a few examples are given to demonstrate some fundamental operating methods for the read out of tightening results from the tool and the handling of tightening data in tightening results administration.

2.6.5.1 Reading out tightening data out of the tool

- Connect the tool and switch it on.
- Read out the content of the tool's tightening data memory with the help of the button . After that, the tool view shows all files with tightening result stored in the tool.
- Select the files with tightening results of interest.
- Read out the selected files from the tool by pressing the button . This action can alternatively be carried out with a double click onto the selected entries in the tool view or via drag and drop of the selected tool view entries into the list of tightening results. Before reading out, the user will be asked whether the results should be deleted from the tool's memory after read out.

2.6.5.2 Creating directories

In order to create a new directory, the directory list always contains the entry "new" at the end of the list. The items of the list of tightening results can be put here via drag and drop. The sorting sequence of the data sets in the directory will be the same as in the list of all results. This means that the data sets which have been read out last will be placed at the end of the directory. After having dropped the data sets, the directory should be renamed. This action can be carried out either by clicking with the left mouse button into the name field or by pressing the button . Optionally, a remark can be put in.

2.6.5.3 Searching for tightening results

Locating certain tightening results in the list of tightening data sets can be made easier by switching the sorting criteria with a click into the related column header.

To locate certain tightening results from directories in the total list or vice versa, the selection of those tightening data sets can help as described in the following sections.

2.6.5.3.1 Locating data sets from a directory in the total list

If one or more tightening data sets from a directory should be located in the total list of tightening results, you can proceed as following:

- Select the relevant directory in the directory list. After that, the list of tightening results displays the tightening data sets of the selected directory.
- Now select the desired tightening data sets in the list of tightening results.
- Select the item “all” in the directory list. Now, the list of tightening results shows all available tightening data sets and the relevant data sets are selected to locate them easily.

2.6.5.3.2 Locating data sets from the total list in a directory

If one or more tightening data sets from the total list of tightening results should be located in a directory, you can proceed as following:

- Select the item “all” in the directory list. Now, the list of tightening results shows all available tightening data sets.
- Now select the desired tightening data sets in the list of tightening results.
- Select the related directory in the directory list. Now, the list of tightening results shows the tightening data sets of the selected directory and the relevant tightening data sets are selected to locate them easily.

2.6.5.4 Exporting tightening data

The actual list of final values and the statistics view (selection in the list of tightening results) can be exported to other applications via two different ways. Both methods will offer the content of the final value list and the statistics view in text format separated through tabulators.

2.6.5.4.1 Exporting via the Windows® clipboard

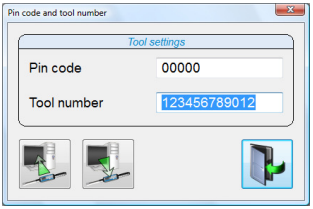
With the help of the button the actual content of the finals value list and the statistics view is copied into the Windows® clipboard. The application which should receive the data then offers the option “paste” to insert the data out of the clipboard.

2.6.5.4.2 Exporting via drag & drop

Alternatively it is possible to export the actual content of the final value list and the statistics view to another application via drag & drop. To do so, simply press and hold the left mouse button over any entry of the final value list or the statistics view. Then move the mouse having still pressed the left button down. After that, the EasyWin Plus software will minimize to make the selection of another application easier. If necessary, another application can be brought into the foreground by moving the mouse over the task bar entry of that application. To import the data, simply release the mouse button after having reached the desired insert position.

2.7 Pin code and tool number

By pressing the button in the main window you will get into the following dialog for setting up a tool security code and a tool number:



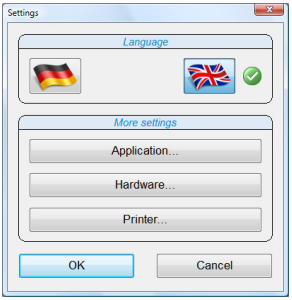
The edit field “pin code” allows to specify a five character long security code. Only numerical characters are allowed. This code is used by the tool to protect some of its special functions.

The field “tool number” is to receive a tool specific number. This number can be up to 12 characters long. Non numerical characters are allowed. The tool number is appended to all of the tightening results of that specific tool. After having opened the dialog, first the number should be read out to prevent the number from an accidentally change.

Button	Description
	Reads out the actual tool number out of the tool and displays it in the related edit field. The pin code is not read out.
	Writes the input into the tool.

2.8 Settings

With the help of the button in the main window, different settings of the EasyWin Plus software can be adjusted. The following dialog will be opened:



In the top area, the language of the EasyWin Plus software can be selected by pressing the button with the corresponding flag.

The icon points out the actual selection if there are several options for choice.

In the middle part of the dialog, further setting can be made. After pressing a button in that area, a subsequent dialog will be shown. The following sections will describe in detail the available settings in the different categories.

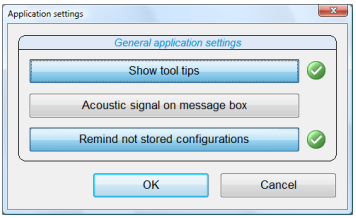
After having pressed the <OK> button, the user will be prompted, whether the changes really should be applied. If the user acknowledges, the settings will be kept permanently and the dialog will be closed. The settings will be loaded automatically at program start.

The <CANCEL> button will close the dialog, too. The changes will be discarded. Before, there will be a security prompt, too.

The <OK> and <CANCEL> buttons in the settings dialog will apply respectively discard all changes, which were made in the subsequent dialogs, too.

2.8.1 General application settings

With the help of the button <application…> the following dialog for adjusting the basic behavior of the EasyWin Plus software will be opened:

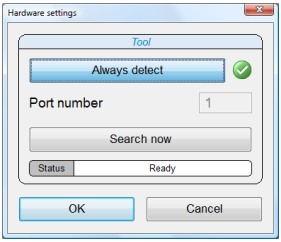


The following settings can be adjusted:

Setting	Description
Show tool tips	If the mouse pointer will be parked over a control element, a short help text will be displayed as a small window.
Acoustic signal on message box	An acoustic signal will be given when opening a message box.
Remind not stored configurations	If the tool view is containing a configuration that is not yet stored, and if that configuration would be discarded (e.g. through a newly read out of the tool or through closing the parameter administration) there will be security prompt before.

2.8.2 Hardware settings

The button <hardware…> opens the following dialog to specify the communication port settings:



This dialog is for adjusting the port number of the RS-232 interface for the tool communication. The right setting for the tool interface is essential for the successful parameterization of the tool and the read out of tightening data from the tool as well as the setting up of the tool number and the tool's pin code!

If the option "always detect" is enabled, there will be a search for the actual tool interface before any tool communication.

In order to save the time for the detection, the tool interface can be adjusted to a fix value. Then, please take the recommendation at the end of this section into account.

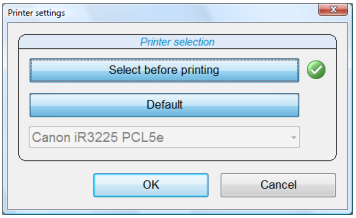
The button <search now> can support you when setting the tool interface to a fix value. If the tool is connected and switched on, with the help of that button, the tool can be detected once. If the detection is successful, the edit field for the "port number" then contains the detected value.

The detection of the tool interface is only carried out for the port number range from 1 up to 99. Please make sure, that the serial interface for the tool communication of your system is placed inside that range (device manager).

Always use the same USB connector of your system, please. Changing the USB connector could lead to a different interface assignment. After having changed the interface assignment, a new setting for the port number respectively a redetection of the port number is necessary.

2.8.3 Printer settings

With the help of the button <printer…> the following dialog for setting up the printer selection can be opened:



If the option <select before printing> is enabled, every time before a print out will be done, a dialog for selecting a printer will be shown.

If this option is disabled, the button <default> can be used to configure the printer selection in a way, that the Windows® default printer is used for the print out.

If the default printer isn't selected, the combo box under it allows to select a certain printer that will be used for print out without any prompt before.

2.9 Info about EasyWin Plus

The button in the main window opens the following dialog to show some information about the application:

3 Data output via serial interface

3.1 Header

After starting the wrench with preset parameters, a header is sent which shows the active tool-number and parameter-set.

Example:

```
Wzg.-Nr.          : 12345ABCDEFG
Dateinummer       : 02
Schraubmodus      : Winkel
Wirkrichtung      : CW
Dateiname         : TESTW_ABLAUF1
Speichermodus     : n. speichernd
Anzahl Messwerte: ----
Haerte            : ------
Fuegemoment       : 0005.0 Nm
Nominalmoment     : 0000.0 Nm
Momentgrenzen     : (0000.0 ... 0000.0)Nm
Nominalwinkel     : 0045.0Ò
Winkelgrenzen     : (0000.0 ... 0000.0)Ò

Zähler: 03
```

If a cycle counter is activated in the parameter-set it will be shown in the header.

Communication protocol:

```
18 0A 0D 57 7A 67 2E 2D 4E 72 2E 20 20 20 20 20   ...Wzg.-Nr.
 20 20 20 3A 20 31 32 33 34 35 41 42 43 44 45 46     : 12345ABCDEF
 47 0A 0D 44 61 74 65 69 6E 75 6D 6D 65 72 20 20   G..Dateinummer
 20 20 20 3A 20 30 32 0A 0D 53 63 68 72 61 75 62     : 02..Schraub
 6D 6F 64 75 73 20 20 20 20 3A 20 57 69 6E 6B 65   modus     : Winke
 6C 20 20 20 20 20 20 0A 0D 57 69 72 6B 72 69 63   l       ..Wirkric
 68 74 75 6E 67 20 20 20 20 3A 20 43 57 20 0A 0D   htung     : CW ..
 44 61 74 65 69 6E 61 6D 65 20 20 20 20 20 20 20   Dateiname
 3A 20 54 45 53 54 57 5F 41 42 4C 41 55 46 31 20   : TESTW_ABLAUF1
 20 20 20 20 20 20 20 20 20 20 0A 0D 53 70 65 69             ..Spei
 63 68 65 72 6D 6F 64 75 73 20 20 20 3A 20 6E 2E   chermodus   : n.
 20 73 70 65 69 63 68 65 72 6E 64 0A 0D 41 6E 7A    speichernd..Anz
 61 68 6C 20 4D 65 73 73 77 65 72 74 65 3A 20 2D   ahl Messwerte: -
 2D 2D 2D 0A 0D 48 61 65 72 74 65 20 20 20 20 20   ---..Haerte
 20 20 20 20 20 3A 20 2D 2D 2D 2D 2D 2D 0A 0D 46        : ------..F
 75 65 67 65 6D 6F 6D 65 6E 74 20 20 20 20 20 3A   uegemoment     :
 20 30 30 30 35 2E 30 20 4E 6D 20 20 20 20 0A 0D    0005.0 Nm    ..
 4E 6F 6D 69 6E 61 6C 6D 6F 6D 65 6E 74 20 20 20   Nominalmoment
 3A 20 30 30 30 30 2E 30 20 4E 6D 20 20 20 20 0A   : 0000.0 Nm    .
 0D 4D 6F 6D 65 6E 74 67 72 65 6E 7A 65 6E 20 20   .Momentgrenzen
 20 3A 20 28 30 30 30 30 2E 30 20 2E 2E 2E 20 30    : (0000.0 ... 0
 30 30 30 2E 30 29 4E 6D 20 20 20 20 0A 0D 4E 6F   000.0)Nm    ..No
 6D 69 6E 61 6C 77 69 6E 6B 65 6C 20 20 20 3A 20   minalwinkel   :
 30 30 34 35 2E 30 D2 20 0A 0D 57 69 6E 6B 65 6C   0045.0Ò ..Winkel
 67 72 65 6E 7A 65 6E 20 20 20 3A 20 28 30 30 30   grenzen   : (000
 30 2E 30 20 2E 2E 2E 20 30 30 30 30 2E 30 29 D2   0.0 ... 0000.0)Ò
 0A 0D 0A 0D 5A E4 68 6C 65 72 3A 20 30 33 0A 0D   ....Zähler: 03..
 0A 0D                                             ..
```

3.2 Final tightening data

After a finished tightening procedure the final torque-/ angle results and the OK/NOK evaluation will be sent.

Example:

```
M= 0009.4 Nm
W= 0060.0Ò
Zähler #03 VON #05
IO
```

If a cycle counter is activated in the parameter-set the line „Zähler #XX VON #XX“ will be shown.

Communication protocol:

```
18 4D 3D 20 30 30 30 39 2E 34 20 4E 6D 20 20 20   .M= 0009.4 Nm
 20 0A 0D 57 3D 20 30 30 36 30 2E 30 D2 0A 0D 5A    ..W= 0060.0Ò..Z
 E4 68 6C 65 72 20 23 30 33 20 56 4F 4E 20 23 30   ähler #03 VON #0
 35 0A 0D 49 4F 20 20 20 20 20 0A 0D                5..IO     ..
```

4 Technical Data

Power supply

- rechargeable Lithium-Ion battery, 7,2 V, 2600 mAh, Type 18650, protected (GWK Part No. ABA-0030)
- ca. 13 h endurance per charging cycle
- ca. 7 h recharging time
- continuous use possible in combination with a charging tray or cable-interconnection

Temperature range

- 00 … 40 °C

torque

- accuracy ± 1 % scale (calibration range according to DIN/ISO 6789 from 20% to 100%)
- adjustable bolt centre-distance

angle

- resolution 0.1 °, accuracy ± 1 ° absolute (at nominal-angle of 100°)

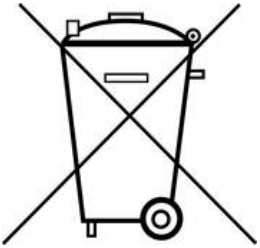
Dimensions & Weight

Model	length	width	hight	weight
60 Nm	430 mm	59 mm	32 mm	ca. 1 kg
200 Nm	522 mm	59 mm	32 mm	ca. 1,4 kg
350 Nm	800 mm	59 mm	32 mm	ca. 2,5 kg
600 Nm	1050 mm	59 mm	38 mm	ca. 4 kg
800 Nm	1360 mm	59 mm	38 mm	ca. 5 kg

(all data without ratchet-head)

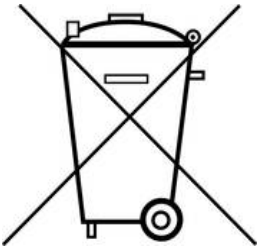
German

Verbraucher sind gesetzlich verpflichtet Altbatterien zu einer geeigneten Sammelstelle/Verkaufsstelle/Versandlager zu bringen. Die durchgestrichene Mülltonne bedeutet: Batterien und Akkus dürfen nicht in den Hausmüll. Pb, Cd und Hg bezeichnet Inhaltsstoffe die oberhalb der gesetzlichen Werte liegen.



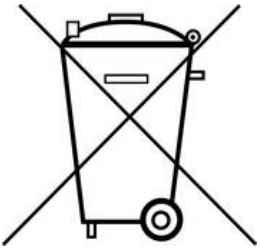
English

Consumers are legally required to dispose of batteries at suitable collection points, vending points or dispatch bays. The crossed-out wheeled bin means that batteries must not be disposed of in the household waste. Pb, Cd and Hg designate substances that exceed the legal limits.



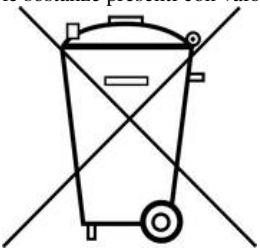
French

La législation exige des consommateurs le dépôt des piles usagées dans un lieu de collecte approprié, un point de vente ou un entrepôt d'expédition. La poubelle barrée signifie qu'il est interdit de jeter les piles et les batteries avec les ordures ménagères. Pb, Cd et Hg désignent les substances dont les valeurs dépassent les limites légales.



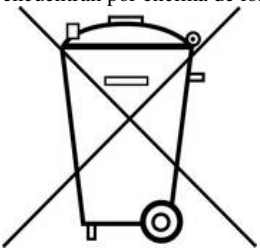
Italian

Per legge, i consumatori sono obbligati a depositare le batterie esaurite presso i punti di raccolta, i punti di vendita o i magazzini di spedizioni. Il simbolo del contenitore dei rifiuti sbarrato indica che è vietato smaltire le batterie con i rifiuti domestici. Pb, Cd e Hg indicano le sostanze presenti con valori superiori alla norma.



Spanish

Los usuarios están obligados por ley a depositar las pilas viejas en un punto de recogida adecuado /punto de venta/centro de envío. El contenedor de basura tachado significa: la pilas no deben desecharse en la basura doméstica. Pb, Cd y Hg designan sustancias que se encuentran por encima de los valores establecidos por ley.



GWK Norbert Gerlach GmbH & Co. KG
In der Steinbach 2, 55758 Schauren, Phone: +49 (0)6786/2904860, Fax: +49 (0)6786/2904861,
info@gwkgerlach.de